

## CLAIMS

1. An active matrix electroluminescent display device comprising an array of display pixels (1) arranged in rows and columns, each pixel comprising:  
5 an electroluminescent (EL) display element (2);  
a drive transistor (22) for driving a current from an associated power supply line (26) through the display element (2), each power line (26) providing power to a respective column of display pixels (1);  
an address transistor (16) for providing a pixel drive signal from a  
10 data line to the gate of the drive transistor (22); and  
an isolating transistor (30) for isolating the drive transistor from the display element,  
wherein device is operable in two modes, a first mode (50) in which the isolating transistor (30) isolates the drive transistor (22) from the  
15 display element for each pixel, and pixel drive signals are provided to all pixels of the array in a row-by-row sequence, and a second mode (52) in which the isolating transistor couples the drive transistor (22) to the display element (2) and current is driven through the display elements.
- 20 2. A device as claimed in claim 1, wherein the EL display element and the drive transistor are connected in series between first (26) and second power lines.
3. A device as claimed in claim 2, wherein the isolating transistor  
25 (30) is connected between the display element (2) and the drive transistor (22).
4. A device as claimed in any preceding claim, wherein the drive transistor (22) is a polysilicon TFT.
- 30 5. A device as claimed in any preceding claim, wherein each pixel further comprises a storage capacitor (24) between the gate and source of the drive transistor (22).

6. A device as claimed in claim 5, wherein each pixel further comprises a light-dependent device (27) for discharging the storage capacitor (24) in dependence on the light output of the display element (2).

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7. A device as claimed in claim 6, wherein the light dependent device (27) comprises a discharge photodiode.

8. A device as claimed in any preceding claim, wherein in the second mode, the isolating transistors (30) for different rows of pixels are turned on to couple the drive transistors (22) to the display elements (2) for rows of pixels in sequence.

9. A method of addressing the pixels of an active matrix electroluminescent display device, comprising an array of rows and columns of display pixels, each comprising an electroluminescent (EL) display element and a drive transistor for driving a current through the display element, the method comprising:

10 in a first mode (50), isolating the drive transistor (22) from the display element (2) in each pixel, and providing pixel drive signals to all pixels of the array in a row-by-row sequence; and

25 in a second mode (52), coupling the drive transistor (22) to the display element (2) in each pixel and driving current through the display elements by drawing current from a column power supply line (26) through the drive transistor and the display element.

10. A method as claimed in claim 9, wherein in the second mode, the drive transistors (22) are coupled to the display elements for rows of pixels in sequence.

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11. A method as claimed in claim 10, wherein, in the second mode, part of the light output from the display element (2) is used to control operation

of the drive transistor (22), thereby to implement an optical feedback control loop.

12. A method as claimed in claim 9, 10 or 11, wherein isolating the  
5 drive transistor (22) from the display element (2) for a pixel comprises turning  
off an isolating transistor (30) between the display element (2) and the drive  
transistor of the pixel (22).